AMENDMENT TO THE CLAIMS:

Replace the claims with the following rewritten listing:

1. – 11. (Cancelled)

12. (New) A method for protecting a tuyere assembly and a refractory lining of a furnace against damage caused by expansion of the refractory lining comprising:

providing a clearance between said tuyere assembly and a refractory lining portion below said tuyere assembly; and

monitoring said clearance by means of a displacement sensor.

13. (New) The method according to claim 12 further comprising:

providing at least one removable refractory layer below said tuyere assembly; and

removing said at least one removable refractory layer if a height of said clearance is less than a predetermined value.

14. (New) The method according to claim 12 further comprising:
sealing said clearance with a compressible sealing material.

15. (New) The method according to claim 12, further comprising:
continuously monitoring said clearance during operation of said furnace.

16. (New) The method according to claim 12, further comprising:
monitoring said clearance during shutdown of said furnace thereby determining contraction behaviour of said refractory lining portion below said tuyere assembly.

17. (New) The method according to claim 12, further comprising:
monitoring said clearance during start-up of said furnace thereby determining expansion behaviour of said refractory lining portion below said tuyere assembly.

18. (New) The method according to claim 12, further comprising:
providing a temperature sensor and monitoring temperature within said clearance between said tuyere assembly and said refractory lining portion to detect possible hot gas leakage.

19. (New) The method according to claim 12, wherein said displacement sensor is a linear electromechanical displacement sensor.

20. (New) The method according to claim 19, wherein said displacement sensor includes:
a sensor body mounted in a mounting hole of a tuyere cooler; and
a measuring pin slidingly supported by said sensor body, said pin having a tip that is in contact with an upper surface of said refractory lining portion or said removable refractory layer.

21. (New) The method according to claim 20, wherein said tip of said pin comprises ceramic, cermet or refractory steel material.

22. (New) The method according to claim 12, wherein said furnace is a shaft furnace, in particular a blast furnace.